

## **2.1.15 Solid Waste Services**

### **2.1.15.1 Introduction**

The Environmental Services Department is responsible for provided a variety of services addressing solid waste management within the City of San Diego. These services include collection of refuse and recyclable wastes, activities involving solid waste code enforcement, and educating the public and businesses on recycling options as described below.

Weekly refuse collection is provided to all single-family and multi-family City residences that are accessible at the curb line of public streets and alleyways. In addition, limited weekly service is provided to small businesses located within the City. Collection is conducted primarily by one-person automated trucks.

Green materials such as leaves and tree branches are collected at 150,000 households at the curbside weekly and some bi-weekly in order to divert greenery material from the landfill and conserve valuable landfill capacity. This material is mulched at the Miramar Landfill and used for various purposes in park and roadway landscaping and is available to residents at no cost.

Residential recycling activities for the most common recyclables addresses state and federal waste reduction mandates by administering the bi-weekly residential Curbside Recycling Program and recycling drop-off areas at 50 Park and Recreation Centers.

Industrial recycling activities include development and implementation of cost-effective waste reduction and recycling programs that reduce the City's dependence on landfill disposal, and to address state and federal waste reduction mandates including the California Integrated Waste Management Act. These activities also encompass research and development of recycling market opportunities for the City.

The Solid Waste Code Enforcement staff is responsible for Citywide enforcement of the solid waste provisions of the Municipal Code. This is accomplished by responding to resident complaints and achieving compliance through the most appropriate remedies available, including issuing notices of violation and citations, and coordinating Community Clean-up Programs. This program also enforces quality control for the Curbside Recycling Program.

The City's program must meet the requirements of the San Diego Municipal Storm Water Permit, as described in Table 2.1.15-1.

**Table 2.1.15-1. Permit Requirements – Solid Waste Services.**

<b>Section</b>	<b>Requirement (Summary)</b>	<b>Permit Section</b>
2.6.2	Implement pollution prevention methods	F.3.d.(1)
2.6.2	Identify high priority areas and activities	F.3.d.(2)
2.6.2	Implement BMPs	F.3.d.(3)
2.6.2	Enforce storm water ordinance in residential areas	F.3.d.(4)
2.6.3	Document activities for Jurisdictional Urban Runoff Management Program for the Annual Assessment	I.

The Solid Waste Services objectives are to:

- Promote pollution prevention by providing effective residential solid waste collection, and educating residents and businesses on recycling options.
- Provide collection events for targeted recyclable wastes, and promote recycling market development zones to encourage the development of new recycling businesses.
- Reduce occurrence of illegal disposal of refuse through education and enforcement activity.
- Document activities and annually summarize findings.

### **2.1.15.2 Activities**

In order to effectively implement the development regulation changes, development review procedures and education and training outlined below, the Environmental Services Department shall maintain a designated coordinator or coordinators to maintain a working understanding of the Municipal Permit so that he/she can provide guidance to department management and staff in implementing the Solid Waste Services Component of the Urban Runoff Management Plan. The name(s) of the coordinator shall be submitted to the Storm Water Program by Thursday, February 21, 2002—the Urban Runoff Management Program implementation date. The Environmental Services Department shall provide the names of new representatives whenever the designated coordinator is replaced. The Storm Water Program will interact with the coordinator(s) to provide the latest Municipal Permit information and to request annual compliance reports from the Environmental Services Department.

The Environmental Services Department has enhanced its regular solid waste and recycling activities by providing the services listed below.

## Pollution Prevention

### *Waste Reduction and Recycling*

The Environmental Services Department holds an annual Waste Reduction and Recycling Awards program spotlighting successful local businesses. The 33 businesses receiving awards in 2000 saved over \$17M annually through their waste reduction efforts. Other efforts include:

- Produce and distribute the “Bottom Line” case studies of successful businesses for use by local businesses.
- Provide technical assistance to the business community, including free waste audits, to help businesses identify recyclables in their waste stream and to provide implementation guidance.
- Produce and distribute a promotional video and CD of award winners to encourage peer matching and to promote waste reduction and recycling programs.
- Review all new construction plans during the EIP and implementation phases to ensure that waste reduction issues are adequately addressed.
- Staff booths and give presentations at trade shows and environmental fairs to promote business waste reduction and recycling programs.
- Conducted a \$130K waste composition study to identify recyclable waste streams within the San Diego business community.

### *“Green” Procurement Practices*

City Council Policy 100-14 was established in 1989 and strengthened in 1992 to put in place guidelines for procurement of recycled content products. From that policy, a steering committee, comprised of several key departments, was formed to develop and implement a policy on recycled product procurement addressing a wide range of criteria including waste reduction, take back/repair programs, recyclable/recycled content, bio-based, biodegradable, alternate energy, low toxicity, water conservation, low VOC, compostable, energy efficient, reusable and pollution prevention issues. Examples of recycled products currently purchased include office paper and supplies, toner cartridges, construction/building materials, re-treaded tires, janitorial paper products, furnishings (benches, tables, chairs), leisure/play equipment, floor coverings, compost/mulch, containers/storage systems, finishes (paint and wall coverings), re-used concrete/asphalt/brick, rubberized asphalt, and concrete.

The following guidance/programs have been established:

- Paperless purchasing program that reduces waste associated with the

- procurement of products.
- Accounting system to facilitate the purchase of recycled green waste mulch and compost by City Departments.
- Specifications in the Standard Specifications for Public Works Construction “Greenbook” for mulch and compost produced from green waste mulch to facilitate its use throughout Southern California by private companies and government agencies.
- Use of recycled content base aggregate through training given to City employees at the Construction Management and Program Management Academies and in outreach to local construction groups and companies.
- Remodeled the ESD office building into a “Green Building”, converting its offices to showcase and educate construction and building managers on the use of recycled content and environmentally preferable products in new construction.

#### *Refuse Collection - Mileage Reduction Route Smart System*

Citywide collection of municipal solid waste is undergoing a re-routing project utilizing a Geographic Information System called Route Smart to provide increased efficiency in the routes traveled by collection and recycling trucks. Incorporating setout rates and precise locations of customers for curbside refuse, recycling and greenery programs will significantly improve routing models. By further introducing near real-time tonnage information from collection points, routing solutions for collections vehicles will gain additional accuracy and applicability. Working with the routing software vendor to enhance workload balancing algorithms will provide collection operations staff with greater abilities to provide three curbside collection services while ensuring consistent vehicle use levels across all days of the week. Any reduction in the need for additional collection vehicles will reflect a substantial cost savings in providing for the collection needs of City residents.

#### *Refuse Collection - Clean Air Project*

This comprehensive Clean Air Project will convert refuse packers to cleaner burning liquid natural gas (LNG), consolidate refuse packer operations at a more efficient single operations station near the Miramar Landfill, and create a small scale landfill gas liquefaction demonstration project producing liquid methane fuel for use in the refuse packers. It will create the first closed loop system fueling residential refuse packers with the landfill gas created by decomposition of the refuse collected in those same residential neighborhoods. The department’s ultimate goal is to power its entire fleet of approximately 170 heavy-duty trucks on liquid natural gas.

Completion of San Diego’s Clean Air Project will represent one of the most aggressive clean air undertakings by any municipal jurisdiction, not mandated by any other governmental authority. The Project will reduce NOx emissions from converted refuse packers by nearly 40% as well as significantly reduce diesel particulate by displacing

more than 80% of the diesel fuel with cleaner burning LNG. Once Landfill Gas Conversion is on line, significant reduction in greenhouse gas emissions will result from reduced flaring of landfill gas at the closed landfill. This Project will result in one of the largest conversions, to date, of public refuse packers to LNG in the Country, and represents the first small scale landfill gas liquefaction project in the Country.

### Industrial Activities and Best Management Practices

- **Military Facilities** – Staff works directly with military facilities to assist in recycling and waste reduction programs, which divert waste from the Miramar Landfill.
- **Special Events** – Staff works with a variety of organizations such as the Padres, Gulls, and Chargers to promote recycling activities and incentives during their events.
- **Focused Recycling** – Annual events are organized and promoted to target specific recyclable waste types and collection activities are held. Specific recycling events presently target Christmas trees, electronic wastes, telephone books, and office paper.
- **Collection Services** - Some small businesses are included in the City's refuse collection program. Staff also collects refuse from public litter containers on City streets, Mission Bay, and City beaches.
- **Recycling Market Development Zones** - The City has led two regional recycling market development zones that have been established to foster the development of local markets for recyclables through the establishment of recycled product manufacturers. The zones are promoted at trade shows, media outreach and the development and distribution of brochures and informational materials. Technical and relocation assistance is offered to businesses in concert with the Economic Development Department.
- **Organics Recycling** - The City has an extensive organics recycling program that includes education of the benefits of Grasscycling; the development and distribution of a variety of brochures; the promotion of the City's five compost demonstration gardens; the marketing of over 85,000 tons of organic waste every year; an education outreach program in schools, at home improvement centers and local community centers; and the establishment of food waste recycling programs.

## Education & Training

### *1. Internal/Municipal Education:*

The City of San Diego plans to conduct two levels of education and training for staff: General and Activity Specific. All staff will receive a basic introduction to the issue via a "General Storm Water" workshop created by the General Services Storm Water Pollution Prevention Program. Additionally, those departments or work groups that perform work activities specifically identified in, and affected by, the Permit will create, execute and fund Activity Specific training sessions to introduce new work processes, functions and behaviors that incorporate the Best Management Practices necessary for staff to prevent illegal discharges into the City's storm water collection and conveyance system and recreational waters. Additionally, the Departments will fund the External Education and Outreach elements in this plan. All education and outreach covered by the permit shall contain the phrase, "Another City of San Diego Think Blue Program protecting our beaches, bays and watersheds."

### *A) General Storm Water Training Provided By the Storm Water Program:*

The General Storm Water workshops, while created by the Storm Water Program, are primarily being given by trainers to the staff of their respective departments. And, Items 2,3,4,5 and 6, below, are the educational materials created for the workshops. A "Train the Trainer" workshop was also created and given by the Storm Water Program (Item 7) to familiarize the trainers on the material and subject matter prior to rolling out the General Training workshop to their department staff.

**Table 2.1.15-2. Storm Water Program General Training.**

ITEM	AVAILABLE
1. Clean Water Leader/3-Cs BMP Reference Card	July 2001
2. General Storm Water Training Video	October 2001 To be completed by June 2002
3. City Employee Brochure	October 2001
4. Stop Pollution Pad	October 2001
5. Employee Knowledge & Behavior Survey. To be given before and after each General Storm Water Workshop by department trainers	October 2001
6. Frequently Asked Questions for department trainers	October 2001
7. Train the Trainer Sessions. Training of department trainers on content and materials for the General Storm Water Workshops	September 10-14, 2001

ITEM	AVAILABLE
8. Storm Water Newsletter	July/August 2002*

\* Note that Items 1 through 7 occurred in FY 2002 for citywide distribution, and that Item 8 is slated for Fiscal Year 2003 and reflects an estimated available date.

## 2. External Education:

The external educational efforts for solid waste service activities are as follows:

**Table 2.1.15-3. External Education.**

External Education Program/Activity	When Available
1. <b>Phone Book Recycling Program-</b> Provide information for annual phone book recycling.	Current
2. <b>Christmas Tree Recycling Program-</b> Provide residents with the opportunity to recycle Christmas trees at 30 convenient locations.	Current
3. <b>Miramar Landfill-Organic Recycling Program-</b> Provide residents information on the benefits of Grasscycling; the development and distribution of a variety of brochures; the promotion of the City's five compost demonstration gardens; Clean, source-separated organic material such as landscaping debris, curbside greenery collection, pre and post consumer food waste is accepted.	Current
4. <b>Schools Program</b> – Offer recycling and solid waste education to schools in a variety of formats. Activities include hosting an environmental fair for over 500 school children every April (Earth Month), providing on site technical assistance for schools, and sponsoring awards for the top environmental projects at the San Diego County Annual Science Fair Awards program.	Current
5. <b>Curbside Collection</b> – Provide annual mailings describing the acceptable solid and recyclable wastes to residents using the automated residential curbside recycling program. This service is provided to 270,000 homes.	Current
6. <b>Greenery Wastes</b> – Provide annual mailings describing the acceptable solid and greenery wastes to residents using the curbside greenery recycling program. This service is provided to 150,000 homes. Promote the permitted compost facility at the Miramar Landfill that accepts organic material such as landscaping debris, curbside greenery collection, and pre- and post-consumer food waste.	Current
7. <b>Miramar Recycle Center - Appliance Pilot.</b> Annually update and distribute an appliance recycling guide showing all recycling locations. Implement an appliance recycling pilot in conjunction with Allan Co. at the Miramar Recycling Center to offer residents an opportunity to recycle old appliances.	Jul-02
8. <b>Commercial Outreach</b> - Provide technical assistance and education to the commercial sector in the form of waste audits, the development and publishing of case studies and brochures, an annual awards program, participating in trade shows, and broad media outreach.	Current

External Education Program/Activity	When Available
<b>9. Recycling Market Development Zone (RMDZ)-</b> Promote the two regional recycling market development zones that have been established to foster the development of local markets for recyclables through the establishment of recycled product manufacturers. The zones are promoted at trade shows, media outreach and the development and distribution of brochures and informational materials. Technical and relocation assistance is offered to businesses in concert with the Economic Development Department.	Current
<b>10. Organics Recycling Program -</b> Promote the organics recycling program that includes the benefits of Grasscycling; the development and distribution of a variety of brochures; the promotion of the City's five compost demonstration gardens; the marketing of over 85,000 tons of organic waste every year; an education outreach program in schools, at home improvement centers and local community centers; and the establishment of food waste recycling programs.	Current
<b>11. Electronic Waste Program –</b> Promote the electronic waste recycling with the establishment of special collection events, hosting regional symposiums, the development of brochures, and the establishment of a permanent recycling opportunity at the Miramar Recycling Center.	Current
<b>12. Special Events -</b> Promote recycling at Special Events and in partnerships with major sports teams (Chargers, the Padres, the Aztecs, and the Gulls).	Current

### 2.1.15.3 Phasing

These solid waste services are presently in place. The goals of these services are reviewed annually and activities are adjusted to maximize the available funding.



#### **2.1.15.4 Annual Assessment**

The following form is representative of the quantitative and qualitative measures that will be tracked by the Storm Water Program regarding the Solid Waste Services component in order to prepare the Jurisdictional Urban Runoff Management Program annual assessment. *These assessment factors and questions are presented for information only; some questions may be modified prior to each annual assessment period, and not all of the factors or questions below may apply to each component's responsible department(s).* Prior to each fiscal year, a tailored Annual Assessment Form will be distributed to responsible departments, and will include an Excel spreadsheet containing direct and indirect quantitative and qualitative measures similar to the example below. The Storm Water Program will provide a blank copy of the Annual Assessment Form and additional guidance to department management prior to the beginning of each fiscal year. Submission of this report will require department director approval.

#### **Program Assessment Form - Municipal Facilities Operations and Management – Solid Waste Services**

##### **QUANTITATIVE ASSESSMENT:**

<b>Activity</b>	<b>Quantity</b>	<b>Units</b>	<b>Comments</b>
Number of high priority municipal facilities		#	
Number of high priority municipal facilities targeted for inspection		#	Due to calendar-year vs. fiscal year, staffing, budget, etc., as well as Permit Section F.3.b.(6)(d), the number of sites targeted for inspection may be less than the actual number of sites.
Number of high priority municipal facilities inspected		#	Number of sites (not the number of inspections, which may or may not be the same).
Number of medium and low priority municipal facilities inspected		#	See above.
Quantity of material removed from MS4		tons	direct measure; report in tons.
Quantity of debris removed that could have enter MS4 (i.e. street sweeping, litter removal)		tons	direct measure; report in tons.

**QUALITATIVE ASSESSMENT:**

1. Describe the major accomplishments of this component over the past year.

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2. Summarize the educational and outreach activities conducted for this component over the past year to educate staff on water quality principles.

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3. Summarize new activities or improvements to be implemented next year as a result of your self-assessment.

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4. Other comments.

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**FINANCIAL ASSESSMENT:**

Estimated annual storm water expenditures:

Personnel Expenditures: \_\_\_\_\_

Non-personnel Expenditures: \_\_\_\_\_